



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/839,257	04/20/2001	Brian D. Earl	9606-041	1537
20575	7590	11/02/2004	EXAMINER	
MARGER JOHNSON & MCCOLLOM PC 1030 SW MORRISON STREET PORTLAND, OR 97205			SOWARD, IDA M	
			ART UNIT	PAPER NUMBER
			2822	

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/839,257

Applicant(s)

EARL, BRIAN D.

Examiner

Ida M Soward

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 June 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 2822

### DETAILED ACTION

This office action is in response to the Applicant's amendment filed on June 24, 2004.

#### *Drawings*

The objection to the drawings as failing to comply with 37 CFR 1.84(p)(4) has been withdrawn due to the amendment filed.

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Kawabe (5,609,497).

Kawabe teaches an integrated circuit socket, having: a base **15**; a plurality of electrical contacts **19** in the base; a pressure application subassembly **20-28** including a plurality of pressure application members for applying downward force on an integrated circuit wherein, the pressure assemble members are spring loaded **27 & 28**; and a latching assembly **22 & 23**.

Art Unit: 2822

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabe (5,609,497) as applied to claims 1-2 above, and further in view of Savant (5,288,240).

Kawabe teaches all mentioned in the rejection above. However, Kawabe fails to teach rocker arms. Savant teach rocker arms 51 having surfaces for applying pressure (Figure 1, col. 4, lines 27-46). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the structure of Kawabe with the rocker arms of Savant to improve the socket assembly.

Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabe (5,609,497) as applied to claims 1-2 above, and further in view of Nakano (4,515,425).

Kawabe teaches all mentioned in the rejection above. However, Kawabe fails to teach truss members connected to a base. Nakano teaches truss members 6 connected to a base 1 wherein, the pressure application members 8-10 are connected to the truss members (Figure 2). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the structure of Kawabe with the truss members of Nakano so that the engagement and disengagement of the IC package pressing means can be rapidly carried out.

Art Unit: 2822

Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabe (5,609,497) and Nakano (4,515,425) as applied to claims 1-2 and 6-7 above, and further in view of Noriyuki (5,447,448).

Kawabe and Nakano teach all mentioned in the rejections above. Kawabe further teaches a biasing spring member (claim 1). However, Kawabe and Nakano fail to teach removable pressing pads. Noriyuki teach removable pressing pads including at least one cavity 6 (Figure 1, cols. 2-3, lines 12-68 and 1-11, respectively). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the structure of Kawabe and the truss members of Nakano with the removable pressing pads of Noriyuki to provide an IC socket in which the service life can be prolonged.

Claims 12 and 15-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsubota (5,807,118) in view of Hopfer et al. (5,761,036).

Tsubota teaches an integrated circuit socket, including: a base 1; a first plated (connected to springs) connected to the base; a second plate (under 6) connected to the base; and a latch subassembly 9 & 10 movable between an open position and a closed position and wherein movement from the open position to the closed position causes the first and second plates to move so as to contact an integrated circuit 6 in the socket, thereby positioning the integrated circuit; first and second alignment means 5 and the upper center portion of the base 1; a pair of stationary members (pins below 1) (Figures 2-3, cols. 2-3, lines 47-67 and 1-6). Tsubota further teaches a first pair of locators connected to the base (springs) and a second pair of locators 8 connected to the second plate and wherein the second pair of locators contacts the integrated

Art Unit: 2822

circuit as the latch subassembly is moved from the open position to the closed position thereby aligning the integrated circuit along one edge. However, Tsubota fails to teach a pair of flexible arms. Hopfer et al. teach a pair of flexible arms **72 & 74** (Figure 1, col. 7, lines 37-56). Hopfer et al. further teach the arms contact the integrated circuit **32** and align it about its centerline. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the structure of Tsubota with the flexible arms of Hopfer et al. to increase efficiency in securing the socket assembly.

Claims 13-14 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsubota (5,807,118) and Hopfer et al. (5,761,036) as applied to claim 12 above, and further in view of Savant (5,288,240).

Tsubota and Hopfer et al. teach all mentioned in the rejections above. However Tsubota and Hopfer et al. fail to teach camming members. Savant teaches camming members **50** connected to base **20** (Figure 5., col. 4, lines 27-41). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the structure of Tsubota and the flexible arms of Hopfer et al. with the camming members of Savant to simplify manufacturability.

### ***Response to Arguments***

Applicant's arguments filed 6-24-04 have been fully considered but they are not persuasive. In regard to the remarks on page 6-7, concerning the rejection of claims 1-11, the pressure application subassembly as taught by Kawabe does indeed teach a plurality of pressure

Art Unit: 2822

application members for apply downward force on the integrated circuit. In fact, all the elements of the upper portion of Figure 1 apply a downward force when lowered into the closed position.

In regard to the remarks on pages 7-8, concerning the rejection of claims 12 and 15-21, the movement of the latch subassembly 9 & 10 from the open position to the closed position causes the plates to compress (move) so as to contact the integrated circuit in the socket under integrated circuit 6.

In regard to the remarks on page 8 concerning the rejection of claims 18-21, Tsubota teaches that as the latch subassembly is moved from the open position to the closed position there is an aligning of the integrated circuit along one edge in order the closure to occur.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

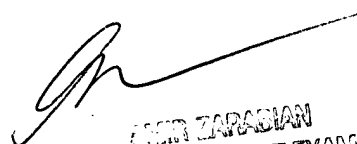
Art Unit: 2822

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ida M Soward whose telephone number is 571-272-1845. The examiner can normally be reached on Monday - Thursday, 6:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on 571-272-1852. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

IMS  
October 28, 2004

  
AMIR ZARABIAN  
PATENT EXAMINER  
TECHNOLOGY CENTER 2800